



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/817,689	06/13/1997	GUY NATHAN	871-31	8565

23117 7590 02/24/2006

NIXON & VANDERHYE, PC  
901 NORTH GLEBE ROAD, 11TH FLOOR  
ARLINGTON, VA 22203

EXAMINER
----------

KOENIG, ANDREW Y

ART UNIT	PAPER NUMBER
----------	--------------

2611

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

08/817,689

Applicant(s)

NATHAN ET AL.

Examiner

Andrew Y. Koenig

Art Unit

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 11-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Claims 11-20 objected to because of the following informalities:  
Independent claim 11 recites "the display buffer"
3. Claim 11 recites the limitation "the display buffer" in line 19. There is insufficient antecedent basis for this limitation in the claim. For the rest of this action, ""the display buffer" will be treated as ""a display buffer."  
  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,355,302 to Martin et al. in view of U.S. Patent 5,521,918 to Kim, U.S. Patent 5,689,641 to Ludwig et al., and U.S. Patent 5,521,922 to Fujinami et al.

Regarding claim 11, Martin teaches a payment-based jukebox, containing a microprocessor as 121a in figure 1 (col. 5, ll. 42-44). As shown in figure 1, jukebox #1 has a microprocessor (121a) that is linked to the coin/bill detector (126), which reads on the claimed payment device, and storage device (93) for storing audio and visual information (col. 5, ll. 8-15), a display (125), a digital audio reproduction device (126). Martin teaches a jukebox with a display; however, Martin fails to disclose a digital display. Official Notice is taken that a digital display is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using a digital display in order to enhance the visual quality of the images.

Martin is silent on the type of operating system (OS) used in the jukebox. Ludwig teaches a multitasking operating system (col. 4, ll. 55-58, col. 6, ll. 15-22, col. 18, ll. 44-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by incorporating a multitasking operating system as taught by Ludwig in order to manage multiple tasks thereby maximizing the processing power of the microprocessor.

Martin teaches storing tools and services integrated into the storage means for operating the jukebox in the read only memory (ROM) of the jukebox (121B; col. 5, ll. 26-37), but is silent on storing software on a storage medium. Official Notice is taken that storing software on a storage medium such as a hard disk or CD-ROM is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by storing the software in a

storage medium such as a hard disk or CD-ROM as taught in order to consolidate the storage of the information at a central location thereby enabling updates to the software.

Furthermore, video processing takes substantially more processing power than audio processing. Martin is silent on a display task having a higher priority than an audio signal. Fujinami teaches that video decoding has a higher priority over an audio decoding (col. 9, ll. 57-61, col. 10, ll. 14-21). Therefore, it would have been obvious to one of ordinary skill in the art to modify Martin by assigning a higher priority to a video signal and a lower one to an audio signal as taught by Fujinami in order to efficiently process a video signal (which has more data than an audio signal).

Martin fails to explicitly disclose using buffers. However, buffers are an inherent characteristic to multi-tasking operating systems in order to process information using different threads and processes. Consequently, the combination of Martin and Ludwig teaches the use of buffers, but are silent on at least two temporary buffers for each said video and audio, said buffers transmitting data to the display means and audio reproduction means through the decompressors, wherein the buffers allow processing into a display and video/audio decompressors by an operating system while transferring data into the other buffer.

Kim teaches plural FIFO buffers for both the video and audio (col. 3, ll. 16-21) from a digital storage media (fig. 1, label 10, col. 2, ll. 51-62), which equates to at least two temporary buffers for each said video and audio, the buffers are coupled to the video and audio decoders (fig. 1, labels 70, 90, respectively) for outputting the signals, which equates to said buffers transmitting data to the display means and audio

reproduction means through the decompressors. Further, Kim teaches video and audio decoders (fig. 1, labels 70, 90, respectively) which inherently have buffers in order to perform decompression of the respective signals. Kim teaches sequentially filling the buffers based on their respective states such that data is read from one FIFO while the system is filling another buffer (col. 3, ll. 16-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using at least two temporary buffers for each said video and audio, said buffers transmitting data to the display means and audio reproduction means through the decompressors, wherein the buffers allow processing into a display and video/audio decompressors by an operating system while transferring data into the other buffer as taught by Kim in order to efficiently buffer, process, and display the respective compressed streams thereby reducing artifacts and buffer overrun and under run errors.

Martin is silent on the temporary buffers associated with status buffers to store data relating to decompression, wherein the buffers are provided for the temporary buffers, wherein the status buffers for video and audio and being put into an active state if one of the two corresponding temporary buffers is empty and if each of the corresponding buffers contains data being put into an inactive state.

Kim teaches separate status buffers for each of the video FIFO and audio FIFO (col. 3, ll. 16-28), which equates to temporary buffers associated with status buffers to store data relating to decompression, wherein the buffers are provided for the temporary buffers. Kim teaches a logic one designating an empty flag signal for an empty buffer,

Art Unit: 2611

which equates to wherein the status buffers for video and audio and being put into an active state if one of the two corresponding temporary buffers is empty, consequently, when the signal is inactive (logic zero) when the buffer contains data (col. 3, ll. 33-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using temporary buffers associated with status buffers to store data relating to decompression, wherein the buffers are provided for the temporary buffers, wherein the status buffers for video and audio and being put into an active state if one of the two corresponding temporary buffers is empty and if each of the corresponding buffers contains data being put into an inactive state. as taught by Kim in order to efficiently manage the FIFO buffers containing data, thereby enabling the system to efficiently process the audio and video signals.

Martin is silent on a scheduling module for reading status values and alternately feed the video and audio buffers with data, wherein the scheduling module performs a test to determine the state of the buffer if the buffers are inactive. Additionally, Martin is silent on an audio buffer having a size sufficient for storing an amount of data to avoid any lack of data during audio operations.

Kim teaches a flag detection block (fig. 1, label 100), flag register (fig. 1, label 50), and microprocessor (fig. 1, label 36), for reading status values and alternatively feeding the buffers with data, and testing to determine if the buffers are inactive (col. 4-5, ll. 56-6), wherein the audio buffer has a size sufficient for storing an amount of data to avoid any of data during operations (col. 5, ll. 7-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by a scheduling module for reading status values and alternately feed the video and audio buffers with data, wherein the scheduling module performs a test to determine the state of the buffer if the buffers are inactive and audio buffer having a size sufficient for storing an amount of data to avoid any lack of data during audio operations as taught by Kim in order to efficiently manage the FIFO buffers containing data, thereby enabling the system to efficiently process the audio and video signals.

However, Martin and Kim are silent on transferring the information to the other by means of the operating system. Ludwig teaches buffering of the video is provided by the operating system, which as described above is a multitasking operating system (col. 32, ll. 27-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin and Kim by transferring information to buffers by the operating system as taught by Ludwig in order to guarantee a continuous flow of audio/video data (Ludwig: col. 32, ll. 35-36).

Regarding claim 12, Martin teaches a modem (label 19 in figure 1); this is connected to a transmission link (col. 3, ll. 26-32).

Regarding claim 13, Martin fails to teach a priority resolution module or a scheduling module. However, Official Notice is taken that the functions of a priority resolution module and a scheduling module are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by incorporating a priority resolution module in the multi-task



environment in order to properly assign the correct priorities to the task thus providing a more robust design. As for the scheduling module, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using a scheduling module in the multi-task environment in order to maximize the available resources for use by other tasks.

Regarding claim 14, Martin fails to teach temporary buffers. Official Notice is taken that temporary buffers are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using temporary buffers in order to communicate between task levels and improve robustness.

Regarding claim 15, Martin fails to teach a "manager." Official Notice is taken that a manager is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by including a manager in order to handle any non-real time operations and maintain the system. Managing takes substantially less processing power than audio and video; therefore, it would have been obvious to assign the management module a lower priority.

6. Claims 16-17 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,355,302 to Martin et al., U.S. Patent 5,521,918 to Kim, U.S. Patent 5,689,641 to Ludwig et al., and U.S. Patent 5,521,922 to Fujinami et al. in view of U.S. Patent 5,481,509 to Knowles.

Regarding claim 16, Martin teaches a mass storage device for storing audiovisual information (col. 5, ll. 26-41), however Martin fails to show a hard drive. Knowles teaches using a hard drive to store audio and video information. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using a hard drive in order to easily swap the old hard drive with a new hard drive (col. 3, ll. 37-43). Official Notice is taken that storing an operating system on a hard drive is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by storing the operating system on the hard drive in order to obviating the need for a read-only-memory (ROM). Martin is silent on a status file including information relating to the insertion of money, addition of a selection to the queue, end of a selection and data allowing the system to return to a specified location in case of an interruption by a fault. However, Official Notice is taken that storing status information in hard disk is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by storing information on a hard disk in order to provide to access information upon startup and put the player in a known state.

Regarding claim 17, Martin teaches a display (label 125, figure 1); however, Martin fails to teach a touch screen. Knowles teaches a touch screen and a video display (label 18, figure 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by adding a touch screen and a video display as taught by Knowles in order to present the user with a

Art Unit: 2611

menu including directions for operating the jukebox system (col. 4, ll. 7-11). Martin fails to show a control panel. Knowles teaches a control panel with at least control panels, see figure 5. Martin fails to show the first title selection panel. In figure 5, Knowles teaches the "touch the title of your choice" panel which reads on the first title selection panel to help customers find and select a desired title. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by incorporating instructions in order to further facilitate the user in selecting music. Martin fails to explicitly show a second management control panel. Clearly the function of the second management control panel is taught by Martin; the jukebox as disclosed would have a volume control. Martin teaches the use of a database in the central management system (label 11, figure 1), but fails to teach a database at the user location. Knowles teaches the use of a database in a jukebox (col. 7, ll. 16-22); scanning is an inherent characteristic of databases. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using a database as taught by Knowles in order to scan for songs to simplify the searching process, thereby aiding the user in finding music. Martin fails to teach a fourth statistics panel, for statistical estimation. However, Knowles teaches storing statistical information regarding the played tracks (col. 7, ll. 16-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by gathering statistical information of the songs as taught by Knowles in order to pay royalties and obtain additional operator information.

Art Unit: 2611

7. Claims 18-19 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,355,302 to Martin et al., U.S. Patent 5,521,918 to Kim, U.S. Patent 5,689,641 to Ludwig et al., and U.S. Patent 5,521,922 to Fujinami et al. in view of U.S. Patent 5,282,028 to Johnson et al.

Regarding claim 18, Martin fails to teach a remote control. Johnson teaches a remote control with a volume control (label 200, figure 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by using a remote control with volume control in order to adjust the volume of the jukebox thereby giving more audio control to the user.

Regarding claim 19, Martin fails to teach storing "system operating parameters in a file," which is unable to be read by the user. Official Notice is taken that hiding system files is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by hiding system files in order to create a robust and secure system from abuse.

8. Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,355,302 to Martin et al., U.S. Patent 5,521,918 to Kim, U.S. Patent 5,689,641 to Ludwig et al., U.S. Patent 5,521,922 to Fujinami et al., and U.S. Patent 5,282,028 to Johnson et al in view of U.S. Patent 5,481,509 to Knowles.

Regarding claim 20, Martin fails to teach fixing a price for a title. Official Notice that fixing a price for a title is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

Art Unit: 2611

Martin by charging a user for playing a song in order to maximize revenue. Martin fails to teach an inactivity delay before starting a visual promotion and an auxiliary source.

Knowles teaches playing a commercial during a delay (label 182, figure 4C), which reads on a visual promotion and an auxiliary source (col. 7, ll. 34-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Martin by playing a commercial as taught by Knowles in order to keep the jukebox active.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Koenig whose telephone number is (571) 272-7296. The examiner can normally be reached on M-Th (7:30 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ayk